

FIG. 1

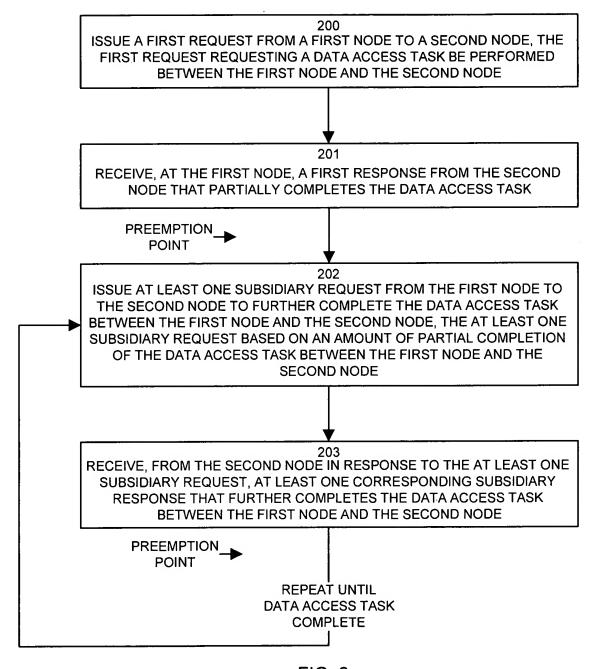


FIG. 2

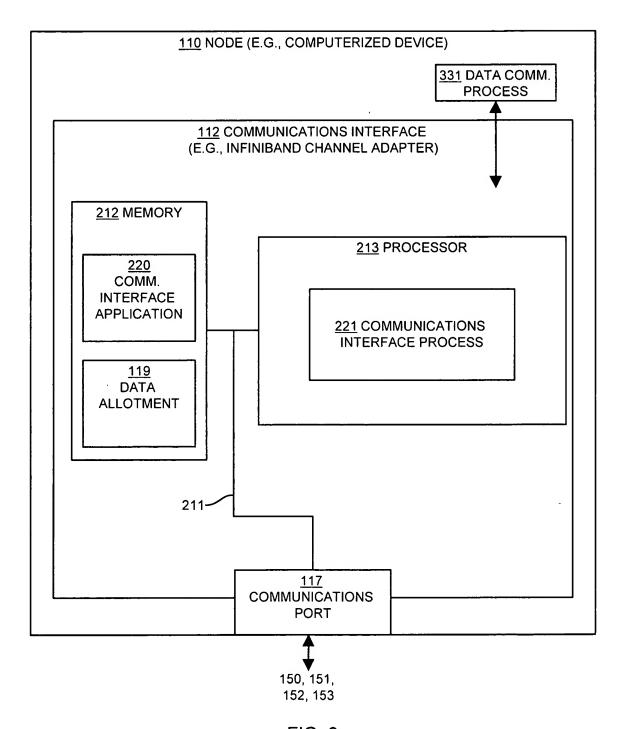


FIG. 3

300

ESTABLISH A DATA ALLOTMENT AS A MAXIMUM AMOUNT OF DATA TO BE USED WHEN RESPONDING TO REQUESTS TO TRANSFER PORTIONS OF DATA BETWEEN THE NODES, SUCH THAT IF A TOTAL AMOUNT OF DATA TO BE TRANSFERRED BETWEEN THE FIRST NODE AND THE SECOND NODE IS GREATER THAN THE DATA ALLOTMENT, THE SECOND NODE PROVIDES THE FIRST RESPONSE AND THE AT LEAST ONE SUBSIDIARY RESPONSE THAT CONTAIN RESPONSE DATA THAT DOES NOT EXCEED THE DATA ALLOTMENT

300-1

DYNAMICALLY DETERMINING THE DATA ALLOTMENT BETWEEN THE FIRST AND SECOND NODES BASED ON AT LEAST ONE EXTERNAL DATA ALLOTMENT EVENT, SUCH THAT IF THE AT LEAST ONE EXTERNAL DATA ALLOTMENT EVENT OCCURS, THE FIRST AND SECOND NODES CHANGE A VALUE OF THE DATA ALLOTMENT

<u>▼</u>

DETECT AN APPLICATION REQUEST IN A REQUEST QUEUE, THE APPLICATION REQUEST IDENTIFYING THE DATA ACCESS TASK TO BE PERFORMED BETWEEN THE FIRST AND SECOND NODE

302

ISSUE AT LEAST ONE SUBSIDIARY REQUEST FROM THE FIRST NODE TO THE SECOND NODE TO FURTHER COMPLETE THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE, THE AT LEAST ONE SUBSIDIARY REQUEST BASED ON AN AMOUNT OF PARTIAL COMPLETION OF THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

303

ALLOCATE CONTEXT RESOURCES IN THE FIRST NODE FOR RECEIPT OF THE FIRST RESPONSE AND FOR RECEIPT OF THE AT LEAST ONE SUBSIDIARY RESPONSE, THE CONTEXT RESOURCES ALLOCATED IN AN AMOUNT AT LEAST EQUAL TO A DATA ALLOTMENT IDENTIFYING AN AMOUNT OF CONTEXT RESOURCES CAPABLE OF SUPPORTING AT LEAST PARTIAL COMPLETION OF THE DATA ACCESS TASK

304

RESERVE A PREDETERMINED AMOUNT OF THE CONTEXT RESOURCES ACCORDING
TO A PRESET DATA ALLOTMENT IDENTIFYING AN AMOUNT OF DATA TO BE
TRANSFERRED BETWEEN THE FIRST AND SECOND NODES

305

RECEIVE, FROM THE SECOND NODE IN RESPONSE TO THE AT LEAST ONE SUBSIDIARY REQUEST, AT LEAST ONE CORRESPONDING SUBSIDIARY RESPONSE THAT FURTHER COMPLETES THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

TO STEP 306 IN FIGURE 5

306

REPEAT ISSUING AT LEAST ONE SUBSIDIARY REQUEST AND RECEIVING AT LEAST ONE CORRESPONDING SUBSIDIARY RESPONSE BETWEEN THE FIRST AND SECOND NODES UNTIL THE DATA ACCESS TASK IS TOTALLY COMPLETE BETWEEN THE FIRST AND SECOND NODES

307

ISSUE AT LEAST ONE SUBSIDIARY REQUEST FROM THE FIRST NODE TO THE SECOND NODE TO FURTHER COMPLETE THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE, THE AT LEAST ONE SUBSIDIARY REQUEST BASED ON AN AMOUNT OF PARTIAL COMPLETION OF THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

308

RECEIVE, FROM THE SECOND NODE IN RESPONSE TO THE AT LEAST ONE SUBSIDIARY REQUEST, AT LEAST ONE CORRESPONDING SUBSIDIARY RESPONSE THAT FURTHER COMPLETES THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

309

PRE-EMPT THE CONTEXT RESOURCES IN THE FIRST NODE FOR RECEIPT OF THE FIRST RESPONSE AND FOR RECEIPT OF THE AT LEAST ONE SUBSIDIARY RESPONSE PRIOR TO FULL COMPLETION OF THE DATA ACCESS TASK

310

ISSUE A SECOND REQUEST FROM THE FIRST NODE USING THE PRE-EMPTED CONTEXT RESOURCES

311

AT A TIME AFTER ISSUANCE OF THE SECOND REQUEST FROM THE FIRST NODE, ALLOCATE CONTEXT RESOURCES IN AN AMOUNT CAPABLE OF SUPPORTING AT LEAST PARTIAL COMPLETION OF THE DATA ACCESS TASK IN ORDER TO CONTINUE REPEATING ISSUING AT LEAST ONE SUBSIDIARY REQUEST AND RECEIVING AT LEAST ONE CORRESPONDING SUBSIDIARY RESPONSE BETWEEN THE FIRST AND SECOND NODES UNTIL THE DATA ACCESS TASK IS TOTALLY COMPLETE BETWEEN THE FIRST AND SECOND NODES

307

ISSUE AT LEAST ONE SUBSIDIARY REQUEST FROM THE FIRST NODE TO THE SECOND NODE TO FURTHER COMPLETE THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE, THE AT LEAST ONE SUBSIDIARY REQUEST BASED ON AN AMOUNT OF PARTIAL COMPLETION OF THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

321

CALCULATE A REMAINING AMOUNT OF DATA REQUIRED TO COMPLETE THE DATA ACCESS TASK BETWEEN THE FIRST NODE AND THE SECOND NODE

322

DETERMINE A TOTAL COMPLETED AMOUNT OF DATA PROCESSED FOR THE DATA ACCESS TASK BY THE FIRST REQUEST AND ASSOCIATED FIRST RESPONSE AND ALL SUBSIDIARY REQUESTS AND CORRESPONDING SUBSIDIARY RESPONSES BETWEEN THE FIRST AND SECOND NODE

323

DETERMINE THE REMAINING AMOUNT OF DATA REQUIRED TO COMPLETE THE DATA ACCESS TASK AS A DIFFERENCE BETWEEN AN INITIAL AMOUNT OF DATA SPECIFIED BY AN APPLICATION REQUEST AND THE TOTAL COMPLETED AMOUNT OF DATA

324

CREATE THE AT LEAST ONE SUBSIDIARY REQUEST TO REFERENCE AT LEAST A PORTION OF THE REMAINING AMOUNT OF DATA REQUIRED TO COMPLETE THE DATA ACCESS TASK